ARGUMENTS

In the Office Action dated February 22, 2002, the Examiner rejected claims 1-17 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 4,619,734 to Andersson, in view of U.S. Patent No. 3,293,114 to Kenaga et al. and of the technical paper "Expancel Microspheres in paper," Technical Bulletin No. 13. Significantly, attached to the Office Action, the Examiner returned to Applicants, the IDS filed by Applicants, with the Examiner's indication that Technical Bulletin No. 13 was not dated and, thus, not reviewed by the Examiner. Yet, in rejecting the claims, the Examiner cited the same Technical Bulletin as an allegedly anticipatory reference. Applicants respectfully request the Examiner to resolve this contradiction by indicating by Examiner initials on the IDS that this reference was, in fact, reviewed.

1. **Claims 1-4, 11-12, and 16**

In rejecting claims 1-4, 11-12, and 16, the Examiner asserted that Andersson teaches a tissue paper having 1 to 10% by weight of expandable microspheres that are added to the furnish, at the wet end of the papermaking process, to increase bulk. Per the Examiner, Andersson teaches multi- and single-layered tissues, but only exemplifies a three-layer product. The Examiner alleges that although "[t]he bulk of the exemplified products is usually greater than 4 cm^3/g . . . one of ordinary skill in the art would recognize that the bulk of a single-layered product would be less than a multi-layered product for the same raw materials and papermaking conditions and that the bulk can be adjusted to

required level(s) if so desired." (Emphasis supplied). Applicants respectfully submit that the Examiner misinterpreted the teachings in Andersson.

Specifically, Andersson does not merely exemplify his teachings with products having bulk greater than 4 cm^3/g. His teachings are paper products having bulk greater than 4 cm^3/g. To wit, Andersson characterizes his invention as high "bulk paper" products. *See, e.g.,* title, abstract, column 1, lines 1-3, and independent claims 1 and 6. Andersson defines "high bulk" paper products as products having bulk values "of about 4.0 m^3/kg x 10-3 [*i.e.* 4.0 cm^3/g] and above." Andersson, column 6, lines 62-64. Thus, although Andersson teaches single-layered tissues, the single-layered tissues must still have bulk about 4.0 cm^3/g or above to be within the scope of Andersson's teachings. In short, Andersson does not teach tissue products with bulk values of about 3 cm^3/g or less as in the present invention. Therefore, because Andersson does not meet the claim requirement of bulk values of about 3 cm^3/g or less, or otherwise teach that aspect of the present invention, Andersson cannot be an anticipatory reference under section 102.

Furthermore, Andersson does not teach tissue products with bulk values of about 3 cm^3/g or less and that are opaque. As the Examiner admits, Andersson is silent as to the opacity of the paper. The Examiner argues that since Kenaga *et al.* and Technical Bulletin No. 13 teach that the use of expandable microspheres increases paper opacity, thus, the tissues taught by Andersson would inherently have an increased opacity. Applicants respectfully submit that the Examiner misinterpreted the functionality of the microspheres.

Specifically, as taught in the present Application at page 10, lines 10-17, the addition of expandable microspheres does not inherently result in an opacity increase. To the contrary, as taught in the Application, certain high basis weight fibrous materials show a decrease rather than an increase in opacity when microspheres are added to the fiber furnish. Andersson does not address the issue of opacity nor does Andersson teach or suggest whether the addition of microspheres increases or decreases the opacity of the product claimed therein.

In addition, the Examiner failed to show any suggestions in any of the cited references to combine the teachings in Andersson with those in the other references (Kenaga et al. and Technical Bulletin No. 13). Furthermore, even if the references were to contain any suggestions to combine their teachings, the combined product would not have a bulk value of about 3 cm^3/g or less, as required by the present invention. Thus, even if one of ordinary skill in the art would have been led to combine the references, the combined references would still lack the claim limitation of a "bulk value of about 3 cm^3/g or less". Therefore, the references, even if combinable, do not make the invention obvious under section 103.

Consequently, Applicants respectfully submit that the present invention is patentably distinct over the references cited by the Examiner, and request the Examiner to reconsider the rejection of Claims 1-4, 11-12, and 16.

2. **Claims 5 and 13**

In rejecting dependent claims 5 and 13, the Examiner asserted that Andersson teaches tissues with grammage between 25 to 30 g/m^3. However, as

discussed above, Andersson does not teach that tissues, of any grammage, having bulk value of about 3 cm^3/g or less that are opacified by adding to the fiber furnish expandable microspheres in an amount of about 1% or less by weight of the furnish. Thus, Applicants respectfully submit, dependent claims 5 and 13 are patentably distinct over the references cited by the Examiner.

3. Claims 6 and 14

The Examiner admits that Andersson does not teach tissues having a basis weight of about 14 to 18 gsm as claimed in claims 6 and 14 of the present Application. However, the Examiner asserts that Andersson only exemplifies three-layered tissues and that "one of ordinary skill in the art would recognize that the grammage of single layered tissue would be less than a three layered one." Furthermore, per the Examiner, U.S. Patent No. 5,129,988 to Farrington, Jr. teaches single layered tissues within the claimed range. Thus, the Examiner concludes, the single tissue product suggested by Andersson would have grammage within the claimed range with only minor and obvious modifications. Applicants respectfully disagree.

Specifically, as discussed above, a modification of the Andersson's product would not lead to the paper product of the present invention, i.e., one having a bulk value of about 3 cm^3/g or less that is opacified by the addition of microspheres. Consequently, Applicants respectfully submit, dependent claims 6 and 14 are patentably distinct over the references cited by the Examiner. Applicants request the Examiner to withdraw the rejection of these claims.

4. Claims 7 and 8

In rejecting dependent claims 7 and 8, the Examiner asserted that Andersson teaches the use of hardwood and softwood fibers. Andersson, however, does not teach the use of recycled fibers, Kraft fibers, fibers containing sulfite or cellulosic fibers as taught in claim 8 of the present Application. Furthermore, claims 7 and 8 of the present Application teach the use of those materials in a process for forming tissue products having bulk values of 3 cm^3/g or less, according to a method that adds to the fiber furnish thermally expandable microspheres in an amount of about 1% or less by weight of the furnish. Andersson, as discussed above, does not teach such a method. Thus, Applicants respectfully submit, dependent claims 7 and 8 are patentably distinct over the references cited by the Examiner.

5. Claims 9 and 15

In rejecting dependent claims 9 and 15, the Examiner, after admitting that Andersson is silent as to the use of retention aids, asserted that "Technical Bulletin No. 13 clearly indicates that it is necessary to add a retention aid in order to reach sufficient retention of microspheres in fine paper." Thus, per the Examiner, it would have been obvious to use a retention aid in the process claimed in dependent claim 9 and the tissue product claimed in dependent claim 15. However, claims 9 and 15 are dependent on claims 1 and 11, respectively, that are, as discussed above, patentably distinct over the references cited by the

Examiner. Thus, Applicants respectfully submit, dependent claims 9 and 15 are also patentably distinct over the same references.

6. **Claims 10 and 17**

While admitting that Andersson does not teach the use 0.5% of microspheres, the Examiner asserts that the range claimed in Claims 10 and 17 of the present Application is the consequence of an optimization process that would have been obvious to a person of ordinary skill in the art. Per the Examiner, Andersson aims to increase tissue bulk and, thus, if the purpose is to opacify the paper, the addition levels would have been less than for just obtaining a bulkier web. Applicants respectfully disagree.

Specifically, Applicants have already shown that there are no teachings or suggestions in Andersson as to how increase or decrease the opacity of a paper product by the addition of microspheres. As Applicants discussed above, depending on the paper parameters, the addition of microspheres may lead to a decrease rather to an increase of the opacity. The person with ordinary skill in the art is without any guidance as to how to optimize the paper opacity. The claimed range is not simply the result of an optimization process.

Furthermore, as also stated above, Andersson's tissue is one of "high bulk", a term that Andersson defines as products having bulk values of about 4.0 cm^3/g. As expounded in greater detail above, the paper product of the present invention has bulk value of about 3 cm^3/g or less. Thus, optimizing Andersson's product would still not lead to the product claimed in the present Application.

Consequently, Applicants respectfully submit, Claims 10 and 17 are patentably distinct over the teaching of Andersson. Applicants request the Examiner to withdraw the rejection of these claims.

In summary, in view of the foregoing arguments, we respectfully submit that the rejected claims are patentably distinct over the references cited by the Examiner and meet all other statutory requirements. We believe that the present Application is now in complete condition for allowance and, therefore, respectfully request the Examiner to reconsider the rejections in the Office Action and allow this Application. We invite the Examiner to telephone the undersigned should any issues remain after the consideration of this response.

Please charge any additional fees that may be required to Deposit Account No. 50-1196.

Respectfully requested,

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Appendix

Version with Markings Showing Changes

2. A process according to claim 1 wherein said opaque tissue products are sanitary bath tissue, facial tissue, or towels[, or the like].

4. A process according to claim 3 wherein said thermally expandable microspheres are added to said fiber furnish either [just in front of] prior to or at the headbox during said wet end of said manufacturing process for said tissue products.

8. A process according to claim 3 wherein said fiber furnish comprises recycled fibers, Kraft fibers, fibers containing sulfite, or cellulosic fibers[, or other such commercial fibers].

12. The tissue product of claim 11 wherein said tissue product is a sanitary bath tissue, facial tissue, or towel[, or the like].